Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	WC Docket No. 18-213
Promoting Telehealth for Low-Income Consumers	)	

COMMENTS OF MUSC

MUSC[1] is grateful for the opportunity to submit these comments in response to the Notice of Inquiry released by the Wireline Competition Bureau of the Federal Communications Commission ("Commission") on how it can help support and advance telehealth initiatives and improve access to broadband-enabled telehealth services.

INTRODUCTION

MUSC applauds the Commission for the vision to enhance much-needed broadband-enabled telehealth services to improve access to high quality health care for rural and vulnerable populations. As the leading academic health center in a state with a large low income, rural and underserved population, MUSC has extensive experience using telehealth methods across the continuum of care in statewide efforts to improve access to primary care, acute care, post-acute care and other care locations (e.g. skilled nursing, schools, prisons).

Through this experience, MUSC has gained unique insight into the attributes required to advance a telehealth agenda as it provides 77 unique telehealth services to over 200 sites in 27 SC counties. Care settings include 32 hospitals, over 100 community clinics, 80 schools, and alternative sites such as nursing facilities, prisons and patients' homes, with 78% of sites being in partially or fully medically underserved regions of South Carolina. MUSC's number of annual telehealth interactions has grown from 1,078 in 2013 to over 235,000 in 2017.

[1] Founded in 1824, The Medical University of South Carolina (MUSC) continues the tradition of excellence in education, research and patient care as the only academic health sciences center in the state of South Carolina.

As one of only two Telehealth Centers of Excellence in the country,[2] MUSC has historically targeted highly prevalent chronic and acute health conditions that put residents of South Carolina at risk for death or disability. Building on the strengths of a large academic health center, telehealth at MUSC has evolved over the past decade to a broad array of hospital-based telehealth services. The Center for Telehealth offers Pediatric Emergency and Critical Care, Neonatology, Sickle Cell care services, Tele-EEG, Tele-Neurology and a nationally recognized program in Tele-stroke which uses remote imaging and real-time neurologic consultation. The MUSC Health Tele-ICU Operations Center delivers 24/7, continuous patient monitoring of partner hospital ICU patients by MUSC and Advanced ICU Care intensivists and nursing staff. MUSC is also currently providing extensive community services via telehealth. These include a Maternal Fetal Medicine telehealth program, which increases access to care to better manage risks during pregnancy and help reduce premature birth rates, neonatal death rates and the maternal death rates. Its Telemental Health Services offer many psychiatric care programs such as services to facilities which treat patients with opioid use disorder, adolescents with mental illnesses, veterans with PTSD and survivors of civilian trauma.

MUSC has developed Virtual Tele Consultations, or VTC, which brings specialty video-based consultations from the university's medical providers to patients located in their primary medical homes throughout the state. Special and vulnerable populations are served by teleconsultations in skilled nursing facilities, schools, jails and prisons offering both acute care and chronic disease management in order to increase access to care and reduce unnecessary medical transfers. More recently, MUSC has initiated direct patient services using mobile health applications and Remote Patient Monitoring (RPM) for a variety of clinical populations. These efforts have produced sustained medication adherence and reduced emergency department visits and hospitalizations. Partnering with primary care practices in rural areas across the state, the Center for Telehealth in collaboration with the MUSC Center for Heath Disparities Research is rapidly deploying RPM devices to control diabetes and hypertension-- two major risk factors for stroke and heart disease. MUSC has extended RPM to care for kidney transplant recipients, as well as patients with chronic lung disease and heart disease.

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[2] MUSC was named a Telehealth Center of Excellence in 2017 by the Health Resources Services Administration http://academicdepartments.musc.edu/newscenter/2017/telehealth-center-of-excellence/index.html

IMPROVING HEALTH OUTCOMES THROUGH BROADBAND ACCESS

Many of MUSC telehealth services rely on facility-to-facility broadband connections, imaging, video, diagnostic peripheral devices and health analytic systems (e.g. critical care monitoring). More recently, wireless technology with device-enabled or Bluetooth/smartphone applications for mobile devices and remote patient monitoring have been used to address conditions such diabetes, hypertension, chronic lung disease and kidney transplant as well as support medication adherence, patient engagement interventions and motivational messaging. MUSC's findings suggest remote patient monitoring is extremely effective in diabetes and most likely hypertension control, and believes that mobile applications will be a game changer in treating most chronic illnesses where the patient can be effectively engaged in day-to-day treatment and monitoring. Wireless technology applications in chronic conditions requiring sustained behavior change such as obesity and addiction should also be considered part of the "Connected Care Pilot Program." In MUSC's experience, wireless devices and monitoring costs for diabetes and hypertension are modest, currently less than $300/patient/year (excluding testing supplies) but the returns are many.

SUPPORTING THE TREND TOWARDS CONNECTED CARE EVERYWHERE

The "Connected Care Pilot Program" should support the participation of rural and underserved consumers in the direct-to-consumer health care market. Much like the recent expansion of over-the-counter medications, regulators and health care providers should partner with patients to assure the support for safe, effective evidence-based interventions. Telehealth applications should synergize with a plan of care developed jointly by patients, families and their clinical care providers.

REDUCING HEALTH CARE COSTS FOR PATIENTS, FACILITIES, AND THE HEALTH CARE SYSTEM

There is clear evidence that low-income patients rarely take advantage of or have access to lower cost primary care and too often seek high cost acute care services (e.g. urgent/emergent care) regardless of the severity of their illness. We believe that with the

passage of recent legislation creating incentives for health systems to move care from 'volume-based' care of individuals to 'value-based' care of populations (ACA 2010, MACRA 2015), systems of care will increasingly rely on telemedicine to provide efficient and effective access points for patients and families. Integrated care teams and telehealth systems will facilitate connecting the right patient to the right provider at the right time in the right place, including at home. Cost savings for patients will include less time lost from work or school and lower reliance on in-office care and thus copayments, while affording treatment in more cost-effective care settings. Patient and payer benefits, as we have found at MUSC, bring about more rapid diagnosis, management and control of chronic diseases leading to better clinical and functional outcomes.

COMMENT ON DETERMINTING HOW UNIVERSAL SERVICE FUNDING CAN POSTIVELY IMPACT EXISTING TELEHEALTH INITIATIVES

Given the substantial investments made by the federal government intended to advance Americans' health, we suggest the Commission work to insure federally funded priorities are aligned. We recommend establishing linkages between the CCPP initiative and the Health Resources and Services Administration specifically and the U.S. Department of Health and Human Services broadly.

LESSONS LEARNED FROM OTHER FEDERAL AGENCIES

The "Connected Care Pilot Program" should take into account an applicant's existing Federal relationships in order to build on existing programs and gain synergy from the work of other agencies. The Veterans Health Administration and the Health Services Resources Administration historically serve the populations targeted by the Connected Care Pilot Program (CCPP) and support health care providers who serve those populations. Both agencies could leverage extensive health care relationships, resources, and depth of experience to the pilot program which should contribute to a robust measure of program effectiveness.

COMMENT ON THE BUDGET FOR THIS PROGRAM

As a national leader and innovator in telehealth, MUSC recommends the Commission consider supporting a diverse portfolio of telehealth CCPP's with regards to scope and budget.

Organizations in early or mid-stage telehealth delivery may be well served with the suggested $5 million budget. However, some organizations may be poised to deploy population level telehealth in their state's rural communities and would buttress the operational components of a population health program with state-of-the-art biomedical and machine learning artificial intelligence resources available to their team. To enable this aspirational vision, we suggest criteria for enabling organizations to request a budget aligned with an ambitious scope and reach. Furthermore, we suggest that multi-state collaborations be encouraged where feasible to maximize CCPP synergies and ultimately taxpayer return on investment.

COMMENT ON THE APPLICATION PROCESS FOR PARTICIPANTS

The Connected Care pilots will be most successful if the applicant is an organization directly responsible for the care of the targeted population that belongs to a provider network with a prepared proactive workforce. The effectiveness of the CCPP will be enhanced by funding organizations that have health care providers who are educated and engaged in telehealth initiatives, and enabled by aligned financial incentives to improve access to care, improve quality of care and reduce cost.

COMMENT ON THE CRITERIA FOR SELECTING THE TYPES OF CONNECTED CARE PILOT PROJECTS

The United States faces a burgeoning population of patients with multiple chronic illnesses and a delivery system that is not adequately prepared to integrate preventive care strategies across the continuum of care. We believe that projects selected should include populations with high prevalence of risk factors for functional impairment or death. For example, South Carolina has one of the highest stroke rates by state in the country and the highest county-level rates that are rural. Using telehealth strategies, MUSC has developed a nationally recognized stroke care program to rapidly diagnose and treat stroke and minimize the functional impact of this devastating disease. It is now implementing a preventive strategy to reduce major risk factors for stroke and employing a statewide partnership with primary care providers using remote patient monitoring to improve the control of diabetes and hypertension. Funding projects that build on an existing continuum of care: primary care, secondary care and tertiary care would net optimal results.

HEALTH CARE PROVIDERS SHOULD BE PERMITTED TO PARTICIPATE IN THE PILOT PROGRAM

Interventions should incorporate patient and community input and primary care involvement at all stages of development. To align provider financial incentives with improved access and patient outcomes, preference should be given to systems participating in alternative payment models (APMs) such as patient-centered medical homes and accountable care organizations. Although limiting to specific payers is attractive for financial analysis, there are risks: missing significant numbers of underserved rural patients (e.g. uninsured) and patients with insurance that is inadequate for their care (e.g. high-deductible commercial insurance).

LOCATION AS A FACTOR IN SELECTING PARTICIPATING CLINICS AND HOSPITALS

Preference should be given to projects that focus on patients by residence. The majority of CCPP patients should reside in counties designated by HRSA as 'Medically Underserved Areas/Populations' (MUA/Ps), and county-level data should support high prevalence of targeted conditions. Providers of those or contiguous counties should be targeted for participation in CCPP. For example, MUSC has used county-level data to identify rural counties with high stroke rate and is implementing remote monitoring at all willing practices within those counties.

LIMITING TO ESTABLISHED TELEHEALTH PROGRAMS

Given the necessarily limited duration of funding, experience matters. We believe CCPP preference should be given to systems with at least five years of telehealth experience in at least two chronic disease telehealth management programs and at least one primary prevention care program. We further recommend that priority be given to organizations with a demonstrated track record of serving rural and underserved populations with a significant burden of chronic disease prevalence and the academic resources to critically evaluate cost effectiveness of telehealth services.

COMMENT ON BROADBAND SERVICE PROVIDERS TO PARTICIPATE

Both MUSC and others' experience suggests that robust telehealth programs have demonstrated the use of formal criteria to guide productive relationships with broadband service providers in order to address concerns regarding cost efficiencies. Thus, we recommend that these relationships, guided by such principles, continue to support the growth of telehealth networks.

LIMITING PARTICIPATING PATIENTS TO MEDICAID-ELIGIBLE PATIENTS AND VETERANS

We are very concerned that limiting participation will bias against the selection of systems with poor uninsured or underinsured patients, hamper the effectiveness of interventions and limit the generalizability of any findings. First, uninsured patients are a large proportion of low-income rural residents and would be excluded from CCPP. Yet, after a significant health care event, many previously uninsured individuals will qualify for Medicaid. In the case of stroke, the ability to reduce Medicaid costs depends on preventing a devastating event and subsequent Medicaid enrollment, not caring for it after the impairment occurs. Second, in general, health care providers focus their attention on patients, not payers. If a patient population is not a significant proportion of a provider practice, the provider is unlikely to be engaged in the nuances of their care. Thus, changes in provider behavior in response to telehealth interventions are less likely. Medicaid eligibility varies dramatically by state, and the size of the rural adult population will be dramatically smaller in states which have not expanded Medicaid. Thus, comparing outcomes across pilots is confounded because the target populations will not be comparable. Finally, a significant proportion of veterans get some of their care outside the VHA system, so attributing the impact of a CCPP intervention will be confounded.

FUNDING REMOTE PATIENT MONITORING EQUIPMENT

The pilot program should fund a reasonable amount for program-specific remote monitoring equipment. We believe that large equipment expenditures limit the generalizability of any program findings. We would also discourage the potential substitution of program funds for personal expenditures. The Commission could recommend an annual cost limit per patient such as $1000, which would include purchase, monthly fees and any required supplies.

DURATION OF THE PILOT PROGRAM

We believe that the design, recruitment, implementation and accurate evaluation of CCPP will require a minimum of three years and agree that a six-month ramp up and six-month close out would be optimal. The Commission should also consider funding continuation after the three-year pilot project at a reduced, but reasonable amount.

MEASURING PATIENT HEALTH OUTCOMES AND BEHAVIOR

We support a robust evaluation methodology, using data sources such as surveys, EHR data, hospital and county statistics, and state reported data. Selected data could include:

- Provider and patient acceptance of the project intervention; reporting/ compliance with intervention; dropout/equipment abandonment; rate of use at repeated intervals (e.g. three months); provider medication changes not associated with an office visit; patient refill (medication possession ratio)
- Disease specific measures: intermediary measures such as blood pressure, glucose, Hgb A1C, weight
- Utilization measures: clinic visits, acute care and hospitalization
- Patient outcomes: health events, impairment and disability, death

CONTROL GROUPS

We support the requirement for control groups. Depending on unit of intervention, control groups could be provider, practice or geographic areas such as comparison counties. We note that high prevalence conditions convey the opportunity to acquire significantly larger sample sizes, event rates and the ability to measure clinical change.

CONCLUSION

We wish to thank the Commission for the opportunity to comment in response to this inquiry and look forward to final guidance from the Commission in the near future.

Respectfully Submitted,

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